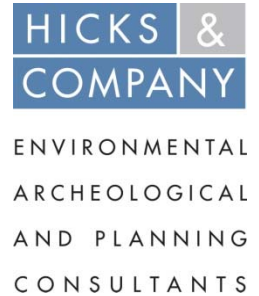




Appendix 2.2: Hicks & Company Preliminary Field Investigations of WOTUS Memo



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January 8, 2018

To: Mr. Kane Carpenter
Environmental Manager at Austin-Bergstrom International Airport

From: Roy G. Frye
Senior Project Manager/Wildlife Ecologist at Hicks & Company Environmental/Archeological Consultants

RE: Preliminary Field Investigations of Waters of the U.S. including Wetlands for the ABIA Master Plan

This memorandum describes the process for updating the status of wetlands and other waters of the U.S. (WOTUS) within the Austin-Bergstrom International Airport (ABIA) property boundary as a part of documenting existing baseline conditions of ecological resources for the ABIA Master Plan. The need for updating the status of existing wetlands (including those that may or may not be jurisdictional) was identified during an early Master Plan coordination meeting as a part of Hicks & Company's scope of work. Preliminary field investigations at ABIA were conducted by Hicks & Company biologists in June 2017 to determine if previously documented wetland sites still existed and continued to exhibit general wetland characteristics. In addition, other wetland sites not previously documented were also identified, preliminarily investigated, and recorded. Detailed wetland determinations of specific sites using the formal protocol established by the U.S. Army Corps of Engineers (USACE) and the City of Austin (COA) were not conducted during the preliminary field investigations. The data collected during this effort are intended for use during evaluation of potential development alternatives for the ABIA Master Plan. Additional investigations will be required once specific development projects are identified (after the planning phase) in order to determine the full extent of potential impacts to wetlands and WOTUS and any associated permitting requirements.

On June 19, 2017, preliminary field investigations were conducted to evaluate wetlands and other WOTUS that would be subject to USACE permitting and/or that meet the criteria established for COA Critical Environmental Features (CEFs). Previous studies and assessments conducted prior to and after transfer of the ABIA property from the U.S. Air Force to the COA were reviewed to determine the locations of previously documented wetland sites and water features such as creek and drainage channels, ponds, springs, and seeps. Descriptions of previously identified sites were reviewed, and maps illustrating the location of these sites were converted to digital files and downloaded to a hand-held GPS with sub-meter accuracy for use during the field investigations. Additionally, sites that may have developed more recently

were also documented during the field investigations. Latitude-longitude coordinates of these new sites were recorded using the GPS and uploaded into GIS. A summary of the previously and newly documented wetland sites is provided in the attached table, along with a map portraying respective color-coded site numbers. This summary incorporates wetland information reported by Baer Engineering in August, 2017.

A total of 42 sites have been investigated within the ABIA property boundaries based on the data reviewed and the results of the preliminary field investigations. Of this total, 32 sites were documented prior to the June 2017 field investigations. Nine additional sites were documented during the preliminary field investigations, and one additional site was identified based on data provided by ABIA and in the COA web-based Property Profile.

Of the original 32 sites previously documented, five sites no longer exist because of airport development (Sites 2, 3a, 3b, 4, and 6). Inconsistency of potential jurisdictional status between original evaluations and June 2017 evaluations occur at three sites (Sites 9b, 12, and 15), likely due to changes in environmental conditions. Seven potential wetlands, seeps, or springs documented during previous investigations were not observed during the 2017 investigations (Sites 19, 20, 21, 22, 23, 27, and 28). Additionally, at least 12 sites will require further field investigations after the planning phase to confirm USACE jurisdictional status (Sites 12, 16, 17, 18, 25, 29, 33, 34, 35, 37, 38, and 39). Additional investigations by Baer Engineering were documented in August 2017 following the June 2017 field work by Hicks & Company, the findings of which are included in the attached table.

Additional details are provided in the attached table and graphic. Please advise if further details on the methods or results of the preliminary field investigations are needed.

Sincerely,

Roy G. Frye
Hicks & Company

Cc: Jennifer Williams, ABIA
Russell Blanck, Landrum & Brown
Andrew Kirchhoff, Landrum & Brown
Samantha Champion, Hicks & Company

Enclosures: 1) Wetland Investigation Summary, Table 2.2-1
2) Evaluation Sites for Potential Waters of the U.S. and Wetlands, Exhibit 2.2-1

Table A2.2-1: Wetland Investigation Summary Table, Preliminary Field Investigations of Waters of the U.S. including Wetlands for the ABIA Master Plan

Site #	Original Description	Current Description	Jurisdictional Status	Dominant Vegetation Present
Sites 1–18: Identified from previous studies including Wetland Assessment of Bergstrom Air Force Base, Texas, by USAF (1992), DOA Master Plan Update (2003) (Appendix 2.2), and ABIA Stormwater Pollution Prevention Plan (2013).¹				
1	Aquatic and riparian habitat	Onion Creek	Jurisdictional WOTUS indicated by defined bed and banks with OHWM. No adjacent wetlands observed.	hackberry, black willow, cedar elm, giant ragweed
2	Non-jurisdictional wetland	Converted to parking area	N/A	N/A
3a	Non-jurisdictional wetland	Converted to stormwater detention pond	Not jurisdictional due to upland location	bermuda grass
3b	Non-jurisdictional wetland	Converted to grass field	N/A	N/A
4	Non-jurisdictional wetland	Converted to air cargo building	N/A	N/A
5	Non-jurisdictional wetland	Upland stormwater drainage ditch with culverts, draining north side of main west runway	Not jurisdictional; not in a floodplain and not directly connected to any creek tributary.	spikerush, smartweed, Johnsongrass, goldenrod
6	Jurisdictional wetland	Converted to grass from runway excavations	N/A	bermuda grass
7a	Non-jurisdictional wetland	West-trending major stormwater drainage ditch that drains west side of west main runway, connecting to Onion Creek tributary; not within but near floodplain; lies adjacent to a seep within Site # 37	Potentially jurisdictional; requires further evaluation (e.g., hydric soil evaluation).	spikerush, Johnsongrass; KR bluestem & western ragweed on upland margins
7b	Jurisdictional wetland	Within same stormwater drainage ditch as 7a, but farther away from floodplain and north along west side of west runway; connects to Onion Creek	Potentially jurisdictional; requires further evaluation (e.g., hydric soil evaluation).	spikerush, Mexican primrose-willow, cattail, dock
8	Non-jurisdictional wetland	Tributary to Onion Creek, exhibits previous excavation including concrete-lined swales and culverts to enhance stormwater drainage from airport and boundary roadways	Jurisdictional WOTUS indicated by defined bed and banks with OHWM.	cattail, ragweed, water, Mexican primrose-willow, hackberry, bumelia, poison ivy, switchgrass
9a	Jurisdictional wetland	Tributary to Onion Creek; exhibits previous excavation including concrete culverts to enhance stormwater drainage from airport	Jurisdictional WOTUS indicated by defined bed and banks with impressive in-channel wetland present.	hackberry, Chinese tallow, black willow, wax-leaf ligustrum, green ash, giant ragweed, peppervine, poison ivy, duckweed
9b	Non-jurisdiction wetland	Headwater tributary to Onion Creek; drains east side of west runway	Jurisdictional WOTUS indicated by defined bed and banks with OHWM. Very deeply incised basin and channel from airport runoff through large culvert; no evidence of wetland observed.	hackberry, Chinese tallow, poison ivy, giant ragweed

Table A2.2-1 Wetland Investigation Summary Table, Preliminary Field Investigations of Waters of the U.S. including Wetlands for the ABIA Master Plan (continued)

Site #	Original Description	Current Description	Jurisdictional Status	Dominant Vegetation Present
10	Non-jurisdictional wetland, drainage ditch	Large grass-lined stormwater drainage ditch	Not jurisdictional	bermuda grass, buffalo grass, King Ranch bluestem
11	Jurisdictional wetland, drainage ditch at bend	Wetland observed at the confluence of two major airport stormwater drainage ditches flowing through closed landfill within the Onion Creek floodplain	Jurisdictional WOTUS connected to a tributary of Onion Creek.	cattail, black willow, dock, Texas vervain
12	Non-jurisdictional wetland, drainage ditch	No wetland observed; wide swale with 7-barred 4'x8' box culvert; large drainage on east side of east runway; no OHWM observed east of access road, but OHWM (8-foot width) present west of access road	Potentially jurisdictional WOTUS; requires further evaluation.	King Ranch bluestem, knotroot, bristlegrass, frogfruit, bermudagrass, crabgrass, nut sedge, curly dock
13	Aquatic habitat, non-jurisdictional	Located within a small riparian drainage near old golf course club house; no wetland observed	Not jurisdictional but could temporarily hold water during rainfall events.	hackberry, goldenrod, dewberry
14	Non-jurisdictional wetland	Located within a small riparian drainage on old golf course; no wetland or obligate wetland plants observed	Not jurisdictional	hackberry, cottonwood, dewberry, poison ivy
15	Aquatic habitat, jurisdictional wetland	Dry, upland man-made pond excavated on old golf course	May hold water temporarily from local runoff, but not located within a floodplain and not connected to any natural drainage; therefore, is not jurisdictional.	black willow, nut sedge, spike rush, sunflower
16	Jurisdictional wetland	Tributary to Colorado River	Jurisdictional WOTUS indicated by defined bed and banks with OHWM; potential wetlands within the creek channel, but requires further evaluation.	black willow, hackberry, greenbriar, poison ivy, grapevine, giant ragweed, Turk's cap
17	Undefined wetland	Onion Creek	Jurisdictional WOTUS indicated by defined bed and banks with OHWM; requires further evaluation for wetland status. ²	hackberry, black willow, cedar elm, pecan, giant ragweed.
18	Ravine; partially jurisdictional	Tributary to Onion Creek	Jurisdictional WOTUS indicated by defined bed and banks with OHWM, with potential adjacent wetland; requires further evaluation on site and upstream to determine wetland status.	riparian vegetation involving hackberry, blackwillow, elephant ear, umbrella sedge, wax-leaf ligustrum, with dense giant ragweed understory.
Sites 19– 29: Additional sites Identified in the 1994 FEIS for Proposed New Austin Airport at Bergstrom.¹				
19	Potential wetland	Upland woods	No wetland observed; not jurisdictional.	hackberry, cedar elm, poison ivy
20	Potential wetland	Onion Creek riparian corridor	Not jurisdictional	hackberry, cedar elm, pecan, bumelia

Table A2.2-1 Wetland Investigation Summary Table, Preliminary Field Investigations of Waters of the U.S. including Wetlands for the ABIA Master Plan (continued)

Site #	Original Description	Current Description	Jurisdictional Status	Dominant Vegetation Present
21	Potential wetland	Onion Creek riparian corridor	Not jurisdictional	hackberry, cedar elm, pecan
22	Seep	No spring observed; grass slope to runway; likely excavated during previous runway construction	Not jurisdictional	King Ranch bluestem, bermuda grass, buffalograss, straggler daisy
23	Seep	No spring observed; upland woods dropping sharply into riparian drainage; no seep or spring indicators found	Not jurisdictional	hackberry, pecan, chinaberry, wax-leaf ligustrum, western soapberry, bumelia
24	Spring	Wetland within excavated area (old gravel quarry); no spring observed; site in close proximity to new Site 32	Jurisdictional wetland adjacent to creek drainage and within floodplain.	green ash, wax-leaf ligustrum, Virginia creeper, poison ivy
25	Spring	Forested wetland occurring within excavated area (old gravel quarry); no spring observed	Adjacent to a tributary of Onion Creek, within floodplain; likely jurisdictional; further evaluations needed; e.g. hydric soil evaluation.	black willow, buttonbush, smartweed, box elder, green ash, poison ivy, Virginia wild-rye
26	Spring	Forested wetland occurring within excavated area (old gravel quarry); no spring observed	Jurisdictional wetland adjacent to creek drainage and within floodplain.	black willow, hackberry, water hyacinth, poison ivy, peppervine, fall aster, Virginia wild-rye, giant ragweed, dewberry
27	Spring	No spring observed; upland woods located at top of slope to creek drainage; no evidence of groundwater discharge	Not jurisdictional	cedar elm woods
28	Spring	Erosional gully present, but no evidence of groundwater discharge	Not jurisdictional	cedar elm woods
29	Spring	No spring observed, although potential wetland exists within bottom of extensive airport drainage ditch at the base of the old landfill	Further evaluation is needed.	cattail, black willow
Sites 30–38: New sites located during field investigation on June 19, 2017.¹				
30	Not previously described or documented	Upland drainage ditch with culverts on north side of access road located downslope within same swale as Site 6, draining north side of main west runway	Not jurisdictional due to no distinct OHWM and not in floodplain.	spikerush, barnyard grass, water primrose, dewberry, Mexican hat, KR bluestem, crabgrass
31	Not previously described or documented	Large runway drainage ditch approximately 100 yards north of Site 7b	Farther away from floodplain than 7a, but connects to Onion Creek tributary downslope; potentially jurisdictional; requires further evaluation (e.g., soil testing).	cattail, spike rush, Mexican primrose-willow; knotroot bristleglass, dock

Table A2.2-1 Wetland Investigation Summary Table, Preliminary Field Investigations of Waters of the U.S. including Wetlands for the ABIA Master Plan (continued)

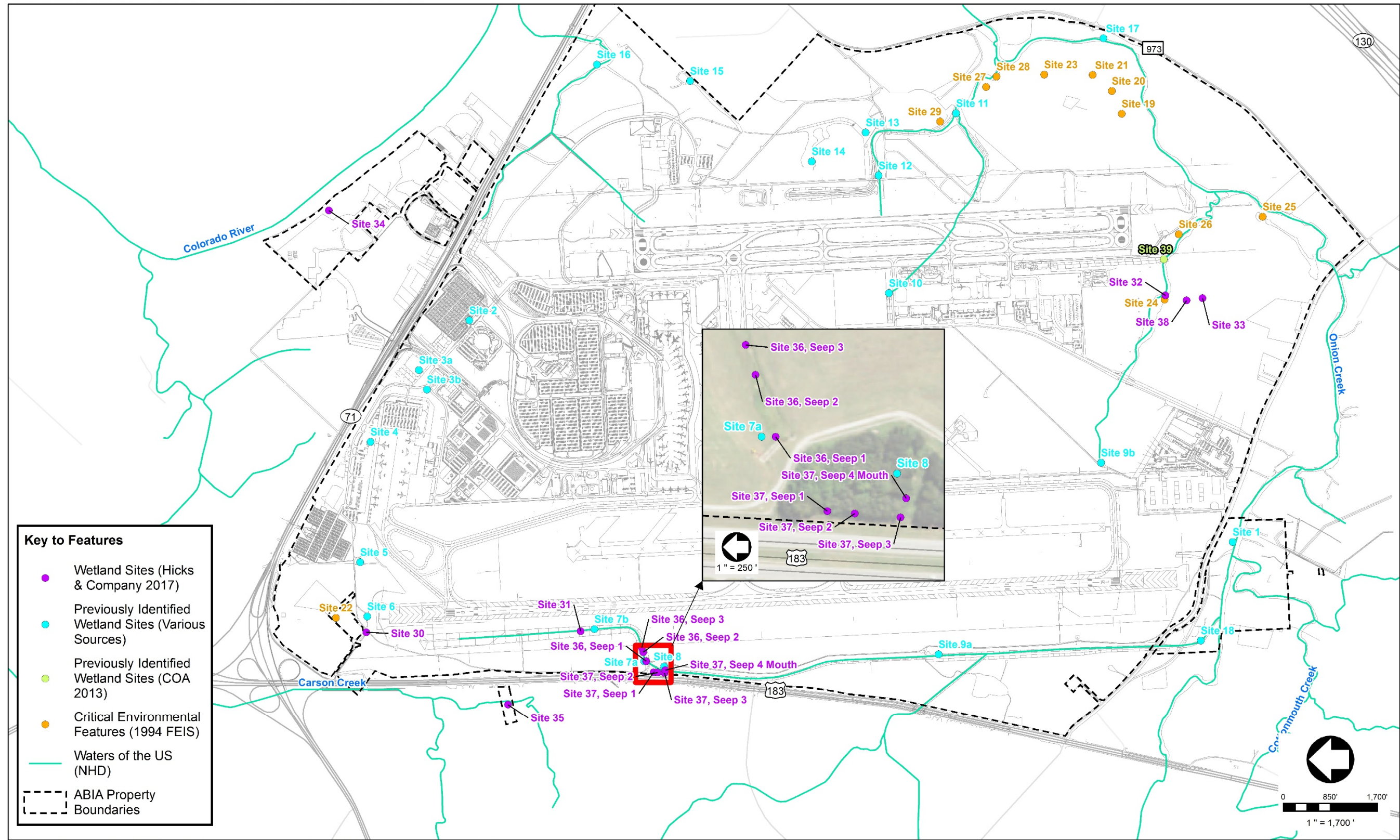
Site #	Original Description	Current Description	Jurisdictional Status	Dominant Vegetation Present
32	Not previously described or documented	Gravel Quarry Wetland(s)	Jurisdictional forested wetland within floodplain; substantial in size, 40–50 feet wide and over 100 feet long, with adjacent wetland to the northwest.	green ash, wax-leaf ligustrum, Virginia creeper, pecan, poison ivy
33	Not previously described or documented	Gravel quarry pond	Created from previous quarry excavation within a floodplain and resulting exposed water table; likely jurisdictional, but requires further evaluation.	open water pond with peripheral spike rush and nut sedge, Mexican primrose-willow
34	Not previously described or documented	Pond within creek drainage	Connected to Colorado River creek tributary, but lies outside the floodplain; likely WOTUS, but requires further evaluation to determine wetland status. ²	hackberry, cedar elm
35	Not previously described or documented	Tributary of Carson Creek intersecting small ABIA property west of U.S. 183; field evaluation limited by high fence bordering elevated unimproved roadway on both sides of property	Requires further evaluation to determine WOTUS and wetland status.	Hackberry, cedar elm Grape, poison ivy, greenbriar
36	Not previously described or documented	Series of seeps discharging groundwater on west side of main runway; appears to be source of flow through Site 7a	Located outside of floodplain; requires further evaluation to determine jurisdictional status.	spikerush
37	Not previously described or documented	Series of seeps discharging groundwater on west side of drainage tributary to Onion Creek near the ABIA boundary fence adjacent to northbound lane of U.S. 183; flows into Site 8	Although contributing substantial flow into drainage tributary to Onion Creek, is located just outside of floodplain; requires further evaluation to determine jurisdictional status.	spikerush, Mexican primrose-willow, smartweed, curly dock, (24" black willow near head)
38	Not previously described or documented	Large seep and associated wetland likely existing from previous quarry operations and exposed water table	Probably exists from exposed water table from previous quarry excavations; located in a floodplain; likely jurisdictional, but requires further evaluation.	spikerush, nut sedge, arrowhead, shrub willow
Site 39: Located per review comment by ABIA staff and indicated by COA web-based Property Profile¹				
39	Wetland	Wetland (as described by COA GIS mapper)	Jurisdictional status requires further evaluation	To be determined

¹ Field verification involved reevaluating designated sites identified during previous studies beginning with the Wetland Assessment of Bergstrom Air Force Base, Texas, by the USAF in 1992, with reevaluations documented in the 2003 COA Master Plan Update and in the Storm Water Pollution Prevention Plan prepared for ABIA by Geomatrix Consultants, Inc., in January 2013. These previously investigated sites are listed according to original number or name designations (Sites 1–18) and also appear on the attached location map in the same

color. Additional sites documented in the 1994 FEIS for the Proposed New Austin Airport at Bergstrom are also included (Sites 19–29) and illustrated in the table and attached location map in a different color. While investigating these sites during a field investigation on June 19, 2017, additional wetland sites were identified (Sites 30–38). Site 39 was added through review comments from ABIA staff and is also portrayed on the COA web-based Property Profile at: <http://www.austintexas.gov/gis/propertyprofile/>.

² Verification was limited to examination of current aerial photography. Further on-site evaluation is needed following the planning phase to determine jurisdictional status and/or permitting requirements.

Exhibit A2.2-1: Evaluation Sites for Potential Waters of the U.S. and Wetlands



Source: See Memo Re: Potential Waters of the U.S. including wetlands for the ABIA Master Plan (Hicks & Company 2018)